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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-09/770.931	01/26/2001	John H. Schneider	00.05.12.1	8223

7590 03/25/2003

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EXAMINER

YU, GINA C

ART UNIT	PAPER NUMBER
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1617

DATE MAILED: 03/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Applicant(s)</b> 09/770,931	<b>Applicant(s)</b> SCHNEIDER ET AL.	
	<b>Examiner</b> Gina C. Yu	<b>Art Unit</b> 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**P r i d for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-30 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) 29,32 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-28, 34, and 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**P r i rity under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

### **DETAILED ACTION**

Receipt is acknowledged of Amendment filed on December 11, 2002. Claims 16-30 and 32 -35 are pending. Rejections under 35 U.S.C. 103 as indicated in the previous Office action dated October 22, 2002 are maintained and modified to meet the claim amendment.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 16, 18, 20, 21, 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walles et al. (US 4756844) ("Walles") in view of Vijayendran et al. (US 5173526) ("Vijayendran").

Walles teaches controlled-release composition having a water permeable membrane comprising submicron particles (anticoalescent agents), which encapsulate a liquid or solid active agent. See abstract. Aqueous colloidal silica is a preferred anticoalescent agent. See col. 5, line 44 – col. 7, line 17. While the Walles invention uses submicron silica, examiner views it obvious for a skilled artisan to have discovered workable particle size by routine experimentation.

The reference teaches that the permeable membrane is applied as a coating to the agent, forming a capsule. Coating materials such as polystyrene, acrylic acid polymers, and synthetic latexes as disclosed as the membrane materials suitable for the prior art invention. See col. 5, lines 7 – 43. The reference teaches that uncoated diameter of core agents can be in the range of 0.04-3 mm. See col. 7, line 58 – col. 8,

line 20; instant claims 21 and 23. There the reference also teaches that the skilled artisan would have decided the membrane thickness depending on the presence of ions and salts and the pH in the carrier liquid, etc. See instant claim 21.

Walles fails to teach polyurethane-vinyl polymers.

Vijayendran teaches polyurethane-vinyl hybrid polymer useful as a protective coating material. The reference teaches that the invention is economically advantageous over the conventionally known coating materials such as polystyrene. See col. 1, lines 15 – 42. Examiner notes that the limitation following “prepared by” ending at “thereby form a urethane/vinyl hybrid polymer” is a process, which will not be given patentable weight in this product claim. See MPEP § 2113.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Walles by substituting the polyurethane-vinyl polymer as suggested by Vijayendran because of the expectation of successfully producing controlled-release composition with cost efficiency.

2. Claims 19, 22, 30, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walles and Vijayendran as applied to claims 16, 18, 20, 21, and 23-28, and further in view of Garcia et al. (US 6436540 B1) (“Garcia”).

While Vijayendran teaches the addition of crosslinking agents, the combined references fail to teach using polyaziridines.

Garcia teaches that polyaziridines are conventionally used in crosslinking polyurethane/polyvinyl hybrid polymers. See Examples 1-4 and Table 1.

It is prima facie obvious to substitute equivalents for same purposes so long as the equivalency is recognized in the prior arts. See MPEP § 2144.06.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by substituting the crosslinking agents there with another conventionally used crosslinking agent polyaziridines, as suggested by Garcia, because of the expectation of successfully producing a composition of similar effects.

3. Claim 17 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Walles and Vijayendran as applied to claims 16, 18, 20, 21, 23-28 above, and further in view of Newlove et al. (US 5948735) ("Newlove").

Walles and Vijayendran, discussed above, fail to teach alkaline earth hydroxide.

Newlove teaches that calcium hydroxide, an alkaline earth hydroxide, is a conventional breaker particles used in the treatment of subterranean formations. See col. 8, lines 20-59. The invention is directed to the use of encapsulated particles of breaker chemicals. See col. 1, lines 5 – 28.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of the combined references by substituting the active agents with calcium hydroxide as suggested by Newlove because of the expectation of successfully producing encapsulated breaker chemicals.

### ***Response to Arguments***

Applicant's arguments with respect to claims 16-28, 30, 34, and 35 have been considered but are unpersuasive.

Applicants argue that the Wallace invention is distinct from the present invention in terms of release mechanism. Examiner notes that instant claims are directed to compositions, wherein the components are well known and the motivation to combine the components would have been obvious to a skilled artisan in view of the prior arts as shown above.

Applicants argue that there is no disclosure or suggestion styrene-butadien rubber in Walles and urethane/vinyl hybrid polymer in Vijayendran are equivalents. As discussed above, both are used as coating materials. Applicants' argument that the capsule membrane of the present invention does not provide the function taught in the Vijayendran reference (i.e., protection from water) is unpersuasive since the same urethane/vinyl hybrid polymer materials would render same effects. While applicants argue that there is no actual teaching of aqueous diffusion through a membrane comprised of a urethane/vinyl hybrid polymer, examiner notes that obviousness rejection may be based on express, implicit, or inherent disclosure of a prior art. See MPEP § 2112. In this case, the use of the Vijayendran polymer as a coating material is obvious.

### ***Conclusion***

No claims are allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina C. Yu whose telephone number is 703-308-3951.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 703-305-1877. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Gina C. Yu  
Patent Examiner  
March 20, 2003



SREENI PADMANABHAN  
PRIMARY EXAMINER

3/21/03